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SIR JOHN M'FADYEAN

". . . you should endeavour to add to the sum of existing veterinary knowledge, so that when your labours are finished, your professional brethren may say, 'He left our inheritance richer than he found it.'"—Inaugural address by Sir J. M'Fadyean, R.V.C., London, 1913.

I.—Early Years, 1853-1882

John M'Fadyean was born on June 17, 1853, on the farm of Barrachan of Bladnoch, Wigtownshire, of which his father, Mr. Andrew M'Fadyean, was the tenant.

After receiving an excellent elementary education at the local school, he became a pupil at the Ewart Institute in Newtonstewart, which was at that time one of the best secondary schools in the South of Scotland, affording an education that was quite adequate to prepare youths for admission to one of the Universities. John M'Fadyean never ceased to be thankful to the Headmaster, Mr. John St. Clair, and the other teachers, for the efficient and inspiring quality of the instruction, and perhaps most of all in respect of the English language and literature.

He left school at the age of 16 and began to help his father on the farm, on which, he thought, it was intended that he should succeed him. Shortly afterwards, however, when an opportunity occurred, his father gave him the choice of being apprenticed to a solicitor in Newtonstewart or of remaining on the farm, and he decided for the latter. The farm was one on which the principal stock was a dairy herd, but there was also a small flock of Leicester sheep. Pigs were also bred, and occasionally horses. He therefore had ample opportunity to become acquainted with the principal species of domesticated animals in health, which he always thought afterwards to be the best foundation for a veterinary student's professional education. His life at this period was very different from that of a modern "farm pupil," for he worked early and late, as hard as any of the servants, and learned to do with his own hands every kind of farm work, not omitting ploughing and mowing. He then thought, and continued through life to think, that farming which embraces the breeding and rearing of farm animals is one of the most attractive of human occupations, but then, as in more recent days, it involved constant hazards which no foresight could avert. Rents were then high everywhere, and with falling prices for grain and animals, his father's farm threatened to become unremunerative. On this account he decided to become a veterinary surgeon. He thought that his desire to do so might have been partly due to the fact that his father was on very friendly terms with the local practitioner, Mr. John Doig, who was a pupil of Dick's (having graduated in 1850), and had a very high reputation for his intelligence and professional ability.

In October, 1874, he entered as a student at the "Dick" Veterinary College, Edinburgh, of which Professor Walley was then Principal. At that period the minimum period of attendance prescribed by the R.C.V.S. was only two years, and in 1876 he obtained the diploma of membership, and at the same time the Veterinary Certificate of the Highland and Agricultural Society of Scotland. In later life he modestly declined to admit that he had exhibited any specially high degree of promise during his career as a student. The records of the time, however, show that in the searching test of the special examination that was then carried out for the award of the FitzWygram Prize, he came out second, the first prize being awarded to George Amos Banham of the London College, to whom an obituary tribute was published in last week's issue of this journal. He was awarded the gold medal of the Highland and Agricultural Society for the best general knowledge of all subjects possessed by the graduates of his year at the "Dick" College.

The year in which M'Fadyean graduated was a specially good one, judging by the number of names which have long been familiar through the reputation of their bearers (such as Fred Smith, Albert Wheatley, G. A. Banham, James McBryde, Joshua Nunn, Francis Raymond). Despite the quality of its teaching staff, the "Dick" College, however, was in those years at a low ebb so far as numbers of students were concerned because a former Principal, Professor Williams, had seceded in 1873 from his post on account of differences with the Governing Body and opened a new school, the New College, in the City of Edinburgh, taking at that time nearly all the students with him. The R.C.V.S. Pass Lists for 1876 (April) show 39 graduates from the London College, six only from the "Dick," eight from the New, and eight from the Glasgow College, M'Fadyean heading the short list from the "Dick" College. As the colleges in those days depended entirely for their support upon students' fees, together with some revenue from clinical practice, the salaries of the teaching staffs were very small. In the autumn of 1876 M'Fadyean was appointed to teach Anatomy at the "Dick" College. The gap of a few months between graduation and this appointment represented the only period during a long working life as a member of the profession when he was not engaged as a veterinary teacher. The "Dick" College had on its staff a conspicuous array of talent, including Dr. McKendrick, soon afterwards elected to the Chair

of Physiology in the University of Glasgow; Dr. D. J. Cunningham, who later became Professor of Anatomy in Trinity College, Dublin; and Professor Dewar, who achieved eminence in the world of chemistry later at Cambridge.

Realising the inadequate character of veterinary education in Great Britain at the time, M'Fadyean resolved to attend classes in Science and Medicine in the University of Edinburgh, in order to improve his equipment as a teacher, and he accordingly matriculated as a student of the University in 1877. He found it an arduous task to pursue the course he had mapped out for himself, while endeavouring to teach Anatomy at the Veterinary College, but it was said later by him that he received much kindness and encouragement from members of the faculties of Medicine and Science in the University, especially from Sir William Turner, Professor of Anatomy, and subsequently Principal of the University; Mr. John Chiene, Professor of Surgery; Dr. Greenfield, Professor of Pathology; Dr. Dixon, Professor of Botany; and Dr. Geikie, Professor of Geology. He passed the final examination in Medicine and Surgery in 1882, and obtained the degree of Bachelor of Science in the following year. The prescribed minimum period of study for the two degrees was, respectively, four years and three years, but as his studies at the classes in Medicine and in Science were partly concurrent, he obtained both degrees in six years from the date of matriculation.

In studying to qualify in human medicine, it never was his intention to abandon Veterinary Science. In 1883, however, he married Mara Eleanor, the eldest daughter of his Principal, Professor Walley, a lady twelve years his junior in age. Soon afterwards, his financial position compelled him to feel dissatisfied with his salary as a member of the staff at the Veterinary College and, as the prospect of any substantial increase appeared to be remote, he decided, after very anxious consideration, to engage in practice as a doctor, and put up the usual brass plate on his front gate, but it was taken down within two years. During that time he still continued to teach Anatomy at the College. In conversation with Lady M'Fadyean in later years, the writer seemed to remember her telling him that she kept her husband's first fee as a souvenir, which was seven shillings for an insurance case. On reminding her afterwards of the incident, she corrected the writer's recollection, in so far as she demurred to having retained the whole amount: she only kept one shilling of it as souvenir, the rest being too much needed for her meagre household expenditure. M'Fadyean's abandonment of medicine as a profession was due to the discovery that it could not be made successful as a part-time occupation, and also to the fact that it did not prove to be congenial; he was heard to say in later years that he did not feel satisfied he knew enough about his cases when called to treat them, seeming to mean that he could not bring himself to soothe his conscience to accept payment for the ordinary pursuit of medical practice. Having thus "burnt his boats," he resolved to devote the whole of his time and energy to Veterinary Science.

Perhaps we may well pause here in the narrative of our subject's career to dwell for a moment on the characteristics which distinguished it at the threshold of its great development. Physically robust, frugal living, and conditioned to a toilsome life from the circumstances of his early upbringing, he inherited from his father, it is understood, a firmness of will-power and shrewdness of outlook, and withal a poise and dignity of bearing from his mother, who was a woman of exceptional feminine grace. It has been said that in his earlier days he was a skilled boxer, and did not hesitate to use his fists to mete out summary justice to the wrongdoer. In our previous issue we had occasion to dwell upon the careers of two of our subject's contemporaries, namely, John Henry Steel and George Amos Banham, who showed at least equally brilliant promise as young graduates. Compared with them, John M'Fadyean remained in comparative obscurity for some years after graduation, consecrating himself meanwhile to very hard study and making the fullest use of the opportunities close at hand to him in Edinburgh to obtain knowledge from and come under the influence of the many eminent teachers at the period in the University. Hence, his inherited equipment, in a firm and stable personality, enabled him to acquire on reaching maturity settled habits of regular, straightforward hard work from which throughout life he would not be deflected.

The first occasion when our subject's name came into prominence was in 1882, shortly after his graduation in medicine, when he took up the cause of students who had rebelled against the injustices, as they felt, of the examination system as it was then conducted by the R.C.V.S. Council, then under the presidency of a colossus in the person of George Fleming, whose reputation and authority in the profession were great, particularly on account of his successful promoting of the Veterinary Surgeons Act, 1881. In those days the examinations were conducted by members of Council themselves, who were often, as the students felt, ignorant of the subjects upon which they professed to examine the students. The outcome was that Fleming, of his own authority, suspended a number of Edinburgh students, and Fleming came in for an outburst of violent behaviour from them. M'Fadyean championed the cause of the students in a press polemic with a brilliant invective, and in a remarkable inaugural address to the "Dick" students in 1882, which in the result eventually removed the abuses in the system and obtained redress for the students. Throughout life, in ways that were seldom known to the outside world, this remained to the few who knew him closely the secret of his success as a disciplinarian: he was relentless in obtaining justice for all placed in his charge who were wrongly oppressed, however humble their station and however mighty the oppressor. Fleming's resentment at this provocation was voiced in a letter published under pseudonym in his journal —The *Veterinary Journal* (1883, **16**, 149). A distinguished veterinarian happily still with us, who was a first-hand witness of these events and supported young M'Fadyean in his attacks on the veterinary colossus, is Mr. J. H. W. Dollar. He remained a life-long friend and admirer, and we are glad to note that he too has recently been awarded the Steel Memorial Prize of the R.C.V.S.

Very early in his experience M'Fadyean realised how greatly the teaching of Veterinary Anatomy was

handicapped by the inadequate character of the text-books then in use, and, in particular, by the non-existence of any work comparable to those used by medical students in dissecting the human body. The ambition to remove this difficulty was the origin of "*The Anatomy of the Horse: A Dissection Guide*," the first edition of which was published in 1884. This book, which was dedicated to his teacher, Sir William Turner, "as a tribute to his eminence as an Anatomical Teacher," long remained perhaps the most indispensable of all textbooks to the veterinary student. Its great precision and economy of language, lucidity, and accuracy render it incapable of supersession except in so far as changes in anatomical nomenclature may demand revision of names. The greater number of the original drawings were made in the rather primitive surroundings of a corner of the dissecting room of the old "Dick" College in Clyde Street, and the majority of the illustrations are original, being faithful portraits of the author's own dissections. The work took some years to compose, for Mr. Dollar recollects that he saw M'Fadyean engaged upon making entire sections of frozen pony carcases for this anatomical work during the severe winters of 1878-79.

Following upon the publication of the above anatomical work, he began the writing of a comprehensive treatise on the comparative anatomy of the domesticated animals, only one instalment of which, "*The Comparative Anatomy of the Domesticated Animals. Part I.—Osteology and Arthrology*," was published, in 1887. Part II, comprising the remaining sections of the work, as promised in the preface to Part I, unfortunately for the veterinary student, never appeared, and they had to wait many years, until the publication of Sisson's and Bradley's textbooks, before satisfactory books were put before them for their studies. For many years Part I of M'Fadyean's work, however, remained the indispensable guide of first-year veterinary students. About this book a contemporary reviewer said: "The text is entirely new and fresh, and there is not a trace of 'cabinet' anatomy from the first page to the last. It has been written down on paper from the very bones themselves. The illustrations are all new, *and fit each other and the text* . . . ." This excerpt is quoted from an early criticism, because with a little change in respect to names it might apply equally aptly to all M'Fadyean's writings throughout his life.

Meanwhile, his bent had undergone a drastic change, from anatomy to pathology and bacteriology. Although in later life it was not easy for those closely associated with him to detect that he had spent 16 years of his early life in the teaching of anatomy, yet the discipline of those years must have had a profound effect on his later work. Professor Share Jones has written: ". . . As an anatomist it is not perhaps for me to say what effect his earlier association with this subject had on him. I know the opinion of such old friends and keen observers as William Hunting. But clarity and logical precision characterised his word—whether spoken or written—and that should be so in anatomy. His contributions to this subject are regarded not only with admiration but actually with affection by many thousands of workers."

II.—Edinburgh Period, 1882-1892: early stages of Pathological Work

The year in which M'Fadyean completed his medical studies at the University, namely, 1882, saw the publication of Koch's classic paper on the discovery of the tubercle bacillus. Forthcoming from the work of Pasteur, Koch, Lister and their disciples, a galaxy of findings was being announced about this time concerning the etiology of important diseases. M'Fadyean alone among veterinarians had equipped himself in this country to seize the opportunities presented by the publication of the methods used in making these discoveries to apply them to working out the etiology of diseases of the domesticated animals. On the Continent, in France and Germany, there was no dearth, however, of brilliant veterinary workers, such as Nocard, Schütz, and others, who were pursuing enthusiastically investigations in the veterinary field by means of the newer methods. Before attention was mainly directed to these microbial discoveries, there had been aroused for some years profound interest in the morbid anatomy and histology of disease following upon Virchow's pioneer work on cellular pathology. The teaching of anatomy was combined with that of histology at the "Dick" College. Hence, under the influence of his teachers at the University, M'Fadyean's transition of interest to morbid anatomy and histology was natural. That M'Fadyean was convinced better knowledge could be obtained of diseases in the domesticated animals by studying their morbid anatomy and histology is evident from the following sentences in the inaugural address given in 1882 to the "Dick" students which we have already mentioned:—

"Constant complaint is heard of that as a profession we are not accorded that place in the public estimation to which we are justly entitled, and many talk as if our position would be made better by Acts of Parliament and things of that nature. . . .

"Our title to a higher place must rest on an increased knowledge of the diseases affecting domestic animals, and on an increased power to cure or to prevent those diseases. Will it be believed that there is hardly an important disease peculiar to the domestic animals the pathology of which is fully and accurately known? . . .

"That but little of this work has been done is because the individual members of our profession have not had that scientific training which is necessary to fit them for the task.

". . . The quality and extent of the teaching afforded by the schools is then of paramount importance, and whatever progress we have made, and are still making as a profession, may be traced to the development of veterinary education. . . ."

Again, a few years later, in 1888, in the opening article in his newly founded journal, he harks back to the same theme:—

"It cannot truthfully be laid to the charge of veterinary pathologists that they have ever been behindhand in dealing with the etiology of the diseases of the lower animals. Indeed, it has been the bane of veterinary science, more especially in our country, that every one essaying to treat of a particular disease, however incomplete and imperfect his knowledge may be of the morbid anatomy of that disease, must formulate a theory which shall account for the symptoms. One nowhere finds a writer who has the courage to say, 'The pathology of this affection is quite unknown; let us be slow to theorise regarding it until we have ascertained more than is yet known regarding its morbid anatomy'. . . ."

Great, as we still know, as is the importance of studying the morbid anatomy and histology of a disease as an essential part in its investigation, it does not by any means always afford a solution so complete as was believed by the early enthusiasts in this subject. Soon the flood of discoveries in bacteriology made this newer subject one of co-ordinate importance so that Professors of Pathology became styled Professors of Pathology and Bacteriology. Before long, as Leclainche has stressed in his textbook on veterinary history, even the annexation of bacteriology to the pathologist's province did not suffice him to exploit the whole field of etiological research. It had to take into account other important aspects of microbiology, which even when these again came to be comprehended seemed to blur the vision towards perceiving disease caused by what was later revealed to be deficiency factors—" disease with a minus sign," as against " disease with the plus sign," which only, it seemed, was admissible into the field of vision of the earlier microbiologists.

In the course of a long life, M'Fadyean witnessed the development of this ever-widening field, and though surprisingly well-informed upon the general trend of the development, it was not without a sense of sympathy for him that his close associates felt that even his powerful mind could no longer adequately embrace a field presenting such diversities that each of them must be allocated to wholetime specialists for proper study. But let us revert again to the beginning of his career as a veterinary scientist. What he found to prevail when he embarked upon it, to continue the last (1888) passage quoted, was :—

" The custom of giving forth as ascertained and demonstrated facts what are merely speculative theories, has done immeasurable harm in retarding investigation. The recent graduate is too often launched into practice in the firm belief that there is little left for him to learn or discover regarding any of the diseases of the lower animals. He has been provided with a theory that will to some extent account for the most prominent symptoms, and with a rule-of-thumb mode of treatment suggested by the theory. His faculties of observation and inquiry are thereby lulled to sleep, and great opportunities to note and record important facts are therefore allowed to slip.

" To set forth the extent of our ignorance regarding any disease, and to show that the current theories regarding its actual nature are imperfect or altogether erroneous is to perform a real service to pathology."

In fulfilment of his creed, M'Fadyean, therefore, soon after he had completed his studies at the University, in 1883, began to conduct a class of pathology at the " Dick " College. Time was made available for the subject within the three years' R.C.V.S. course (established in 1876), but it was not an obligatory subject for examination. This did not come about until the course was extended to four years, in 1895, which was after M'Fadyean's migration (1892) to the London College. The class of pathology, undertaken without remuneration, was mainly a practical one, modelled to a large extent on the instruction then given to medical students in Edinburgh University by Professor Greenfield and Dr. Hamilton, afterwards Professor of Pathology in Aberdeen University—a worker who essayed some research into animal diseases, such as braxy, and who from the number of eminent pathologists trained under him has been heard to be called, though not accurately, " the father of all pathologists." In preparation for the work M'Fadyean acted for a session as one of Professor Greenfield's demonstrators in the University Class. According to Sir Robert Muir, one of his oldest friends and contemporaries, M'Fadyean's enthusiasm for pathology was stimulated by attendance at the meetings of the Edinburgh Pathological Club, which was founded in 1886,

" which has been remarkable as a nursery for scientific workers. He was one of the earliest members and he had as his associates such men as W. S. Greenfield, G. Sims Woodhead, Byrom Bramwell, William Russell and others. The atmosphere was one of keen inquiry and his outlook was no doubt materially widened by the proceedings of the club. His friendship with Woodhead was of the closest kind ; it was mutually helpful, led to co-operation and influenced the work of both. By the time Sir John left Edinburgh, in 1892, his accomplishments as a pathologist were generally recognised and were such as to ensure him future distinction in pathological science."

For the fourth General Meeting of the National Veterinary Association, held in Edinburgh in July, 1886, he collaborated with Woodhead in the presentation of a paper which gave a remarkably comprehensive survey of the bacteriology of the diseases of the domesticated animals as it was known at the time, taking under review anthrax, blackquarter, glanders, swine fever, tuberculosis of the udder, and louping-ill. The discussions which followed were marked by a bitter attack by M'Fadyean (then aged 33) upon Professor Williams, the Principal of the New Veterinary College, a prolific writer many years his senior, who was held in the highest esteem at that time and who had announced some loose theory concerning the etiology of louping-ill. Williams accused him of the inexperience and impulsiveness of youth, to which M'Fadyean rejoined that he " would not be able to plead guilty to that charge for long."

Having now determined to make veterinary pathology his life-work, he had for some time been preparing himself in a way that seemed to him at that time essential, namely, by acquiring the ability to read French and German readily, so as to enable him to read the current Continental veterinary journals and textbooks. He then realised that there was plenty of scope for a new British journal mainly devoted to the pathology of the domesticated animals and so *The Journal of Comparative Pathology and Therapeutics* came to be founded by him in 1888, as a private enterprise. This venture, in which, combining the roles of reporter and editor, he found unfettered scope for independent self-expression, was continued by him, almost single-handed and uninterruptedly, until last year (1940), after an almost unrivalled period, namely, 52 years, under the continuous editorship of one man. A Jubilee Number, published at the close of the 50th volume, as a special tribute to him from his friends and colleagues throughout the world, gives fitting account of the place gained by that journal in veterinary literature and of the life-work of its founder. The task of writing this obituary notice has been materially lightened by reference to its contents. His early colleague, Woodhead, came to found, mainly as the result of the transactions of the Edinburgh Pathological Club, *The Journal of Pathology and Bacteriology*, in 1892, which, however, became the official journal and property of the Pathological Society of Great Britain and Ireland.

During this period M'Fadyean further equipped himself by visits to the Continental veterinary schools and abattoirs, and in 1891 he came into contact with

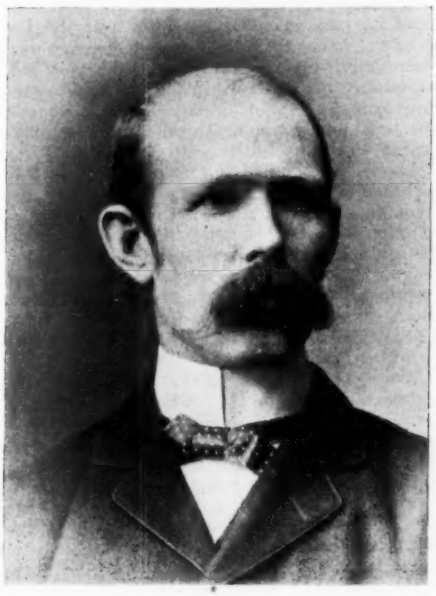
Ostertag, then Chief Veterinary Inspector of the Berlin Abattoir, the great authority on meat inspection, to whom we paid obituary tribute in a recent issue Ostertag came over afterwards as his guest to the Seventh International Congress of Hygiene and Demography held in London on August of the same year. When M'Fadyean acted as one of the four Presidents of Honour at the Second International Congress for Microbiology, held in London in 1936, the lineal successor under changed names of the 1891 Congress at which he was a sectional officer, he was able to reflect on the vast progress during the interval in our knowledge upon the causation and control of animal disease. At the 1891 Congress he presented a paper, in collaboration with Woodhead, on "The Alleged Danger of Consuming the Apparently Healthy Meat and Milk of Tuberculous Animals." A paper was read by Professor Bang, of Copenhagen, on the same subject, while Ostertag presented one on "Milk Diseases and the Regulation of Milk." From his visits abroad he came away much impressed with the work of Professor Johne, of Dresden, and Nocard, of Paris; he was heard to say that he took the latter's papers as his models for style in scientific writing. The expenses of all these activities had to be found out of our subject's income as an anatomical teacher, which at no time before he left Edinburgh exceeded £200 a year.

Of M'Fadyean's interest in meat inspection during this period a short account has been given by our colleague, Colonel Dunlop Young, in the Jubilee Number already referred to. It was his Principal at the "Dick" College, and father-in-law, Professor Walley, who was the pioneer in meat inspection in this country. Walley gave his students during their final year practical courses in this subject and thus trained a number of men who became leaders in this work. He induced the Corporation of the City of Edinburgh to appoint veterinary surgeons as meat inspectors. Later, he wrote his well-known textbook on the subject, which in later editions was revised by M'Fadyean and then by Stockman. In an editorial article devoted to the subject in his journal in 1891, M'Fadyean's deduction was: "As we said on a former occasion, meat inspection is, for the most part, neither more nor less than the *post-mortem* diagnosis of disease, and it follows naturally that the veterinary surgeon is by his training marked out as the most competent person to undertake the duty." M'Fadyean was a witness in the famous trial in Glasgow in 1889, when the Corporation obtained a decision in its favour as to the unfitness for food of carcases affected with tuberculosis. Throughout his active working life he was in demand as an expert witness on this subject. Later, in 1893, after migration to London, he read a comprehensive paper on "The Requisite Inspection of Animals Intended for Food, Prior to and After Death, with the Most Humane Methods of Slaughter," before the Annual Meeting of the N.V.A. at Manchester.

The state of knowledge of the general veterinary practitioner at this time may be gauged from the following excerpt from the reply given by M'Fadyean at a meeting in 1890 of the Midland Counties V.M.A. to a discussion on a paper read by him at the meeting. It also gives an indication of his style of reply, which throughout life varied little :—

". . . For the most part I cannot agree with Mr. Tipper in believing that any disturbance in the proper proportions of the nitrogeneous material in food will generate anthrax. Errors of diet may, of course, predispose an animal which is the victim to them to infection by weakening the resistance it offers to disease germs: but, believing that anthrax acknowledges a single cause, I, of course, cannot believe that the disease can be generated by any mere error of diet. . . ."

In 1891, M'Fadyean read a paper at the Annual Meeting of the National Veterinary Association at Doncaster on "Tuberculosis of Domesticated Animals," which showed that already at that early date his competence in that subject was extensive. Full records of his investigations now came to be recorded regularly in his own journal, and in the Jubilee Number of that journal our colleague, Mr. R. E. Glover, undertook the labour of presenting a fine survey of this one aspect—perhaps the major one from an investigational standpoint—of M'Fadyean's life-work. Early, in the first volume (1888) he described accurately, for the first time in this country, equine tuberculosis, and the accounts given of the lesions leave nothing to be added to them after a lapse of over 50 years. In 1891 he recorded in his journal the first tuberculin tests carried out, by him, in this country, concluding :—



1890

"It is therefore permissible to hope that there has been discovered a substance that will enable veterinary surgeons to diagnose tuberculosis in dairy cattle with greater precision than has hitherto been possible. . . ."

However, the reliability of the test was not accepted without caution and careful further experiments, and it was not until 1893, after his migration to London, that he was able to say :—

"In conclusion, I have no hesitation in saying that, taking full account of its imperfections, tuberculin is the most valuable means of diagnosis that we possess. . . ."

Further investigations reported during this early, Edinburgh, period comprised work on the pathology of haemoglobinuria in horses (1888), symptoms and lesions of swine fever (1888), lung disease caused by *Strongylus rufescens* (probably, he admitted later, identical with the condition more recently investigated under the name *jaagsiekte*), bovine tuberculous mastitis (1889), amyloid disease (1889), and tumours in domesticated animals (1890, 1891). His studies on the animal tumours represented pioneer work of great value in cancer research at the time. His editorial articles brought into focus clearly, in short keenly critical reviews, the meaning of the advances then being made in veterinary science. He brought to the notice of British readers in his journal the best work recorded by Continental investigators at the time, some of their articles receiving full-length translation. He was probably wrong in the vigorous stand he took in 1891 and 1892 over the Deptford ox case in believing it was a case of contagious pleuropneumonia. Opinion inclining to this view led to the imposition of an embargo on the importation of American cattle for slaughter. The case we now know was most likely one of chronic haemorrhagic septicaemia—" cornstalk disease."

Above all, throughout this phase in his career, he exercised his skill unremittingly towards the improvement of veterinary education. Largely through the agitation he caused, a certificate in general education was required, in 1888, before admission to the R.C.V.S. course. A written examination was added to the oral examinations in 1892. Already there was discussion about extending the course from three to four years, so that the teaching of pathology and bacteriology could be included.

When, at the close of the Edinburgh period, he had been engaged on the staff of the " Dick " College for 16 years, M'Fadyean's achievements received tribute in words uttered (*Veterinarian*, 1892, **65**, 420) by the Principal of that institution on the occasion of a handsome presentation : " . . . their best hopes as to his abilities, high as these were, had been more than fulfilled during these 16 years, . . . he stood out as practically the only veterinary pathologist in this country. . . ."

His courses in pathology at the " Dick " College were continued and developed by his disciple, Stewart Stockman, until 1900.

(*To be concluded.*)

DEMAND FOR REVIVAL OF HEAVY HORSE PREMIUMS

Winslow (Bucks) Shire Horse Society is renewing the application it made a year ago for the restoration of the Ministry grant to heavy horse-breeding societies. " At the annual meeting last week," states the *Farmers' Weekly* of January 31st, " it was agreed to press the matter through the Bucks War Executive Committee. Mr. J. T. North, who raised the matter, said the country had become short of horses, and although it was true that a large proportion of agricultural work could be done by tractors, the whole of the work on farms could not be done by those means. At the present rate, it looked as if there was going to be a shortage of horses for agricultural purposes. There had been times when they had not had much encouragement in horse-breeding, but he thought that the prospects for the future were a little better than in the past."

Personal Tributes

Sir Merrik R. Burrell (Chairman of the Governors Royal Veterinary College), writes :—

It is with deep regret that I have heard of the passing of my old and valued colleague, Sir John M'Fadyean. For very many years Lord Northbrook, and latterly I, as Chairman of the Veterinary Committee of the Royal Agricultural Society, and also of the Royal Veterinary College itself, had full opportunity to realise the value of Sir John's advice, co-operation, and loyalty. To his great scientific ability, which made him well known throughout the world, were added business and administrative capabilities vouchsafed to few. It is sometimes forgotten that during the time Sir John was principal of the Royal Veterinary College we not only built the Pathological Research Institute to his plan but also initiated the first appeal for funds both from the Government and the public for the re-building of the College. I have often regretted that Sir John, with his great flair for scientific research, had not had the facilities of our modern laboratories at his disposal. But, after all, it is the man that does the work, not the buildings, and he had such an affection for the old semi-derelict College that he never realised its defects and, I think, mourned for an old friend when we pulled it down.

Under a somewhat austere personality, and behind that ice-cold logical brain was hidden a very kindly heart and steadfast soul. It was an admixture that earned him the respect and affection of all who knew him as well as I am grateful I had the opportunity to do.

. . . . .

Mr. J. G. Wright, F.R.C.V.S. (Professor of Surgery, Royal Veterinary College, London), writes :—

May I be allowed to pay a small tribute to the memory of Sir John M'Fadyean ? I recall him chiefly as my teacher in veterinary pathology. As a student I never spoke to him personally, yet for him I, and my fellow students, had the most profound respect. To us he epitomised veterinary science. My outstanding memory is of his lectures. They were a delightful and not-to-be-forgotten experience—the beauty of his English, the clarity of his enunciation and the care with which every word was chosen; never an exaggeration and always spoken in the third person. His lectures were delivered from notes only, yet they were complete and perfect. He was indeed a learned man.

As a principal he was a stern but just disciplinarian. His actions revealed him to be a man of courage.

A few years ago I was privileged to make personal contact with him in his retirement. His body was frail, but his mind was as clear and his will as strong as ever.

Our profession was indeed fortunate that it possessed in its ranks at the end of the last century a man of the ability and of the capacity for work of John M'Fadyean, for not only was he the founder of veterinary research in this country, but its most active participant for many years also.

He left his profession immeasurably better off than when he entered it.

The *Isle of Wight Times* reports that the Stirling Animal Clinic in Green Street, Ryde, established by the R.S.P.C.A. in conjunction with the National Veterinary Medical Association of Great Britain and Ireland in memory of the late Miss Mary Stirling, of Ryde, was recently opened by the Mayor. Three veterinary surgeons are giving their services.

Right Stifle: Lateral View.

Left Stifle: Lateral View.

THE VETERINARY RECORD

February 22nd, 1941.

A GREAT LEADER OF THE VETERINARY PROFESSION PASSES AWAY

FULL of years, at the end of a period of well-earned repose, the great figure who resolutely led our profession through its infancy as a scientific calling, until it came, as he meant it, "to stand on its own legs," has passed peacefully away.

We make no apology for devoting space in our journal to a recital of his life-work. The rise of veterinary science, and the rise has been a remarkable one in this country, is largely entwined with the life-story of Sir John M'Fadyean. Its fall could come about only if we neglected to pay heed to his precepts and follow, so far as lies in us, his example.

Overlapping his later years there has been a rapid expansion of veterinary research, the outlay for which has become recognised to be remunerative as an item of public expenditure. A younger generation, inured to this, does not always remember that this conception was only pressed to acceptance as public policy through the zeal, ability, and industry of a few extraordinary men, of whom in British veterinary science M'Fadyean in Great Britain and Theiler in South Africa were the outstanding examples.

Be it said to the lasting credit of the British veterinary profession, its members were never slow to pay tribute to Sir John M'Fadyean during his lifetime for his labours directed to the advancement of the profession. Probably no man ever evoked such spontaneous expressions of gratitude on fitting occasion. It was, we know, a source of sincere gratification to him during his last years that his fellow-workers and friends throughout the world took occasion to find expression of their "good wishes, esteem, and gratitude" in the volume produced as a Jubilee Number to mark the close of the 50th year of publication of his journal, *The Journal of Comparative Pathology and Therapeutics*. We are happy to know therefore that to the end he received contentment from the approbation of the profession which he, more than anyone, had raised to a status of tone and dignity, and usefulness in the public esteem, following steadfastly as he did himself the precept which in all his utterances he urged upon his contemporaries, which was "*to strive after that increase of knowledge with regard to animals' diseases, which is the only way by which we can increase the value of the services we are prepared to render to the public.*"

When for the services he had rendered to the profession, he was awarded on his retirement from the Principalship of the Royal Veterinary College, London, the highest award of the R.C.V.S. Council, the seconder of the motion for the conferment of the award, who claimed to be a man of few words, limited himself to saying that at any rate it would be said of the veterinary profession that it had produced one great man. Reviewing now the life of Sir John M'Fadyean, it is hard to believe that the view of that speaker will be much modified by the judgment of posterity. M'Fadyean was "great," whether this be adjudged by the character of his writings in relation to their time, his powers of observation and deduction as a scientific worker, his powers of leadership among his fellow men, or his achievement as an educationist.

CLINICAL COMMUNICATIONS

Epiphyseal Separation in a Dog

ALEX. DOBIE, M.R.C.V.S.

Birkenhead

Subject.—Six-months-old fox terrier dog.

History.—For two weeks the owner had noticed the animal to be slightly lame on the left hind leg, when walking, with no inclination to place any weight on the limb when running. There was evidence of pain—when the dog lay on the left side it was only after great effort that he was able to rise.

Examination.—When examined at the commencement of the third week the tubercle of the tibia was felt to be thickened and tender and on moving the joint there was evidence of acute pain. The first impression was that a fracture had been the original injury and that the thickening of the tubercle was associated with resulting callus formation. As even this was atypical X-ray examination was decided upon.

The radiologist's report was as follows :—

"There is evidence of : (1) An irregularity of the metaphysis beneath the tongue-like projection of the epiphysis of the left tibia which forms part of the tibial tubercle ; (2) a displacement of the upper epiphysis of the left tibia.

"The lesion is probably of the nature of an osteochondropathy, probably analogous to Schlatter's disease in man. It is likely that there may have been an associated trauma, resulting in the epiphyseal displacement.

"A foreign body is shown in or on the left side of the abdomen. This was not noticed until later and was not localised."

Treatment.—The whole leg was extended and placed in plaster. After 14 days this was removed. The pain was obviously subsiding although atrophy of the muscles was in evidence. This time plaster of paris was applied and left five weeks. On removal there was no evidence of pain.

The muscular atrophy was treated by massage and Faradism. After seven months there were no symptoms although the enlarged tubercle could still be plainly felt.

Schlatter's disease was originally described as being a tuberculous infection of the anterior tubercle of the tibia. Mitchiner observes that this same condition is more traumatic in origin, the upper (epiphyseal) portion of the tubercle being partly separated from the underlying shaft by the pull of the quadriceps extensor cruris through the ligamentum patellae, hence it is often first noticed after strenuous training for sports.

Inflammatory action follows with osteoperiostitis and there is always danger that either septic or tuberculous infection may supervene.

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Torsion of the Bowel in the Dog

R. R. BUGG, M R.C.V.S.
AYLESBURY

Subject.—A one-year-old cross-bred terrier dog.

History.—Inappetence, listlessness, occasional vomittine. A street accident had occurred some few weeks previously.

Examination.—Membranes fairly healthy. Temperature 102·8° F. Pulse (not timed), reasonably steady and strong. Abdominal palpation revealed a lump the size of a golf ball in the small intestine.

Diagnosis.—Probably a foreign body in the small intestine.

Operation.—Anaesthesia was induced by nembutal (intravenously). The left flank was clipped and prepared, and the usual aseptic precautions were adopted.

An incision 2½ inches long was made obliquely downwards and backwards across the middle of the flank, through skin, muscles and peritoneum. The fingers were introduced into the abdominal cavity and the lump located and withdrawn through the incision.

On examination this was found to comprise a torsion of the bowl. A rent was found in the mesentery, a portion of omentum had formed adhesions with the herniated bowel and adhesions had also occurred between the adjacent bowel surfaces. Palpation revealed a small piece of stone within the torsion. No strangulation had occurred, the bowel appeared to be reasonably healthy, and the lesion was evidently of some few weeks' duration.

The attached piece of omentum was ligated with catgut and severed from the torsion. It was then thought possible to break down the adhesions between the adjacent intestinal surfaces. This was eventually accomplished but with so much resultant haemorrhage that it became imperative to tie off the mesenteric blood vessels supplying this portion of bowel, and necessitated the resection of 5 inches of the small intestine. Bowel clamps were not available, and my partner's fingers proved a very efficient substitute. The cut ends of the bowel were thoroughly cleaned, swabbed and joined by the telescoping technique, using fine catgut sutures. The muscle wound was closed with interrupted catgut sutures and the skin sutured with silkworm gut.

By the time the operation was completed the animal was suffering from considerable loss of blood, and was very cold. Glucose saline was administered subcutaneously and hot water bottles and blankets provided, but it was confidently predicted that he would die during the night.

To our surprise he was still "amongst those present" next morning and went on well until the fourth day, when he tore open the entire wound—one could hear air being sucked into the abdomen with each respiratory movement. The animal evinced no pain during cleaning of the wound, and it was decided to re-suture without any anaesthetic at all—a procedure accomplished without any movement or sign of pain from the patient.

From then on the animal made an uneventful recovery, was discharged from the kennels ten days after operation and within three weeks so successfully "beat up" a neighbour's dog as to necessitate its visiting our surgery.

Discussion.—It was evident that the original cause of the torsion was the street accident a few weeks previously, and it is thought that this caused no symptoms until the piece of stone became lodged within it.

This case is written not as a report of surgical procedure, but as a record of this animal's extraordinary powers of resistance. Theoretically, he should have died (*a*) from haemorrhage (*b*) from shock, and (*c*) from peritonitis—twice.

ABSTRACTS

[ANIMAL NUTRITION: PANTOTHENIC ACID. FAIRBANKS, B. W., and CURZON, E. (1940.) *N. Amer. Vet.* **21**. 407-410.]

Pantothenic acid is a condensation product of B-alanine and ∝ hydroxy-B-dimethyl- ∝ butyrolactone. It has the same property as the "filtrate factor" of Jukes in that it will cure chick dermatitis produced by feeding a diet that has been heated in a dry atmosphere for 144 hours at 100° C. It is distinct from other factors of the vitamin G or B_2 complex as neither nicotinic acid nor riboflavin will cure this condition. Rice bran extract and baker's yeast are rich sources of the chick antidermatosis factor, while peanut meal, egg yolk, split peas, cow peas, dried skim milk and alfalfa bean meal are good sources. Rolled oats, kale, fat extracted wheat germ, whole corn meal, canned Alaska salmon and fresh beef are fair sources.

The symptoms of chick dermatitis are lesions on the eyelids, at the corner of the mouth and on the legs and feet; the spinal cord is affected, thymus involution occurs and the chicks cease to grow. The amount of pantothenic acid required by chicks for maximum growth and to prevent dermatitis is approximately 1·4 mg. per 100 gm. ration. Rats also need the antidermatitis factor but little is known of the requirements of other animals. Experiments with pigs fed on a diet deficient in filtrate factor produced the following symptoms—weakness of the hind quarters, sagging back, failure in appetite and arrested growth, and a moderate degree of anaemia. The addition of filtrate factor caused a period of growth for three to four weeks and later a second period of growth. It is doubtful whether the filtrate factor used was the same as that of Jukes, and the syndrome described may be due in part to some other factor or factors distinct from pantothenic acid.

Appreciable amounts of pantothenic acid have been demonstrated in the rumen contents of sheep fed on a diet containing only traces of it (0·028 mg.). The sheep apparently does not require pantothenic acid in its diet. Nothing is known regarding the requirements of other animals. A. T. P.

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[SALINE AND DEXTROSE THERAPY. MUNSON, T. O. (1940.) *N. Amer. Vet.* **21**. 411-415.]

Saline solution is isotonic with the blood in 0·90 per cent. solution; dextrose is isotonic in a 5·4 per cent. solution. In order to use an isotonic solution containing both ingredients, it is best to halve

these figures, thus 1 litre of isotonic gluco-saline contains 4·5 gm. sodium chloride and 27 gm. glucose. The solution can be administered by subcutaneous, intraperitoneal or intravenous routes. The effect by the first two routes is more prolonged ; for immediate results the intravenous route must be adopted. Administration *per rectum* is impracticable as the solution is not retained. The oral route has the disadvantage that the solution may be vomited.

The rate of intravenous injection should be from 2 to 6 c.c. per minute ; solutions given too fast may cause " speed shock." This is characterised by a fall in blood pressure, irregular respirations and incoagulability of the blood. By the intraperitoneal route the volume of the solution injected should be limited to 100 to 400 c.c., depending upon the size of the dog.

Gluco-saline therapy can be used to increase the amount of fluid in the body, to overcome loss of chlorides, to supply quick nutrition and also for the purposes of osmotherapy.

In cases of simple dehydration a solution of isotonic glucose alone is preferable. Dehydration is likely to occur in cases of superpurgation, dysentery, fevers, overwork, kidney disease and post-operative conditions. Loss of chloride occurs in cases of extreme vomiting and diarrhoea as in high intestinal obstruction, and in cases complicated by extreme exudation, as in pneumonia, pleurisy with effusion, extensive burns and peritonitis. Here injections of gluco-saline are indicated. Deficient salt intake occurs occasionally in large animals ; it is pointed out that (in treating these cases by saline injection) it is possible to supply too much salt which may result in excessive water retention and oedema.

Glucose can be administered intravenously in solutions up to 50 per cent. in cases where quick nutrition is required. This is indicated in ketosis and in those cases associated with protein catabolism such as in chloroform or phosphorus poisoning.

Cases of shock or severe haemorrhage benefit from gluco-saline therapy. The administration of hypertonic solutions of glucose are said to be of great value in cases of nembutal over-dosage. Osmotherapy has little indication in veterinary practice ; the use of hypertonic glucose has been advocated to decrease cranial pressure accompanying injuries or inflammation of the brain. It is also recommended as a heart stimulant as it increases the strength of the contraction of the heart and the coronary circulation. Hypertonic solutions should never be used where dehydration is already present as fluid is extracted from the tissues and excreted. A. T. P.

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[**VESICULAR EXANTHEMA OF SWINE.** White, B. B. (1940.) *J. Amer. vet. med. Ass.* **97**. 230-232 & 237.]

In California during 1939-1940 vesicular exanthema of swine assumed proportions hitherto unknown and definitely established itself as a disease of major economic importance. Prior to this date a few outbreaks had occurred each year from its discovery in 1932 to 1936. No outbreaks were reported from 1936 until December, 1939, but by June of 1940 123 premises involving over 222,500 pigs were affected, approximately one-fourth of all the swine in the State. The disease had appeared by this time in 25 counties.

The clinical symptoms are identical with foot-and-mouth disease in swine but the two conditions can be differentiated by animal inoculation. Vesicular exanthema is not pathogenic for cattle and guinea-pigs but may affect horses, while foot-and-mouth disease is readily transmissible to cattle and guinea-pigs but is not pathogenic for horses. In an initial outbreak animal inoculation has to be used in order to establish a diagnosis. White advises the use of two horses, three guinea-pigs, two calves and three or more swine.

Following an outbreak the setback in growth and development is pronounced. Serious losses occur in pigs of three weeks old and younger, the mortality sometimes being 90 to 100 per cent.

Since 1934 control of the disease in California has been by quarantine of the affected premises, but it was formerly dealt with as foot-and-mouth disease using the slaughter policy. It was noticeable that on abandoning the slaughter policy, owing to non-continuance of payment of indemnities by the authorities, the disease spread to 31 premises in spite of rigid quarantine measures. W. M. H.

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[**PYOMETRA.** Engle, J. B. (1940.) *N. Amer. Vet.* **21**. 358-361.]

The author summarises his observations on 19 cases attended during a three-year period, and he states that there are three outstanding points with regard to pyometra : (1) that it occurs only when there is a chronic endometritis present ; (2) that temperature cannot be relied upon as a diagnostic sign and should be used only as a guide in making a prognosis ; and (3) surgery has been the most successful form of treatment.

With the exception of one case in a Persian cat, all his patients were bitches and all except one were five years old or older. Many of these had never bred. Bacteriological examinations of the uterine contents were not consistent. Some revealed *Bact. coli*, others *Staph. aureus*, whereas others appeared to be bacteria free. Reference was also made to the possible association of pyometra with endocrine dysfunction.

Various forms of treatment were considered, and the author stated that cervical dilatation in conjunction with pituitrin affords only temporary relief. Tapping the uterus through the abdominal wall and the oral administration of desiccated hypophysis were both useless. He doubted the value of gonadotrophic hormone and progestin and was of the opinion that diathermy could only be palliative. The most effective treatment in his hands was panhysterectomy.

All pyometra cases were prepared by giving an intravenous injection of 500 to 1,000 c.c. of 5 per cent. dextrose in saline four to five hours before operation. Owing to the toxic condition of most patients he preferred morphia and atropine followed by ether for anaesthesia. His incision was made along the median raphé extending forward at least a hand's breadth from an inch in front of the pubis. The uterine horns were delivered with gloved hands and not with instruments, slow removal being important. For the final step in removing the uterus two Jetter-Scheerer pile clamps are placed side by side over the anterior end of the cervix. The tissue between is divided, the uterus removed and, according to the Parker-Kerr method, the clamp holding the stump is oversewn in such a way that when the clamp is removed and traction is placed on the ends of the catgut the stump is inverted.

In the course of the discussion which followed one observer stated that this method of suturing had not proved satisfactory with him and he preferred to cauterise the stump and tack pieces of the broad ligament over the end. Other speakers regarded most cases of pyometra as the result of ovarian dysfunction and some referred to the valuable help in diagnosis given by blood examinations. A leucocyte count of 18,000 to 25,000 was observed in these cases.

G. D.

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[DOSAGE OF SULPHANILAMIDE IN DOGS. Morris, M. L., and Allison, J. B. (1940.) *N. Amer. Vet.* **21**. 294.]

Dosage of sulphanilamide is best expressed as the amount of drug which will, on administration, maintain a concentration in the blood most effectively controlling the disease. In order to maintain a given concentration administration at approximately four-hourly intervals is really essential, but modification may be necessary due to variation in the rate of excretion, this being accelerated by fluid intake and retarded by impaired renal function.

For the treatment of meningo-encephalitis associated with canine distemper a concentration of 15 mg. per 100 c.c. of blood is recommended. The authors achieved this by administering doses of 3·16 grains per pound body weight at four-hourly intervals, thus a 20-lb. dog received approximately 60 to 75 grains during the first 24 hours. One of the doses during the night was sometimes missed. The drug was given in gelatin capsules. Similar intervals were observed throughout treatment but the dose was reduced to approximately 2·5 grains daily after the first 24 to 48 hours, its adequacy being checked by blood sulphanilamide determination at intervals.

The results in a 53-lb. dog so treated are described, with a graph illustrating blood-sulphanilamide concentration, at four-hourly intervals during the initial three days' treatment.

A. E. K.

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[A COMPARATIVE STUDY OF ANAEROBIC STRAINS OF ACTINOMYCES FROM CLINICALLY NORMAL MOUTHS AND FROM ACTINOMYCOTIC LESIONS. Sullivan, H. R., and Goldsworthy, N. E. (1940.) *J. Path. & Bact.* **51**. 253-261.]

The failure to isolate *Actinomyces bovis* (Wolff and Israel), the cause of human and bovine actinomycosis, from sources outside the human or animal body, has given rise to the view of endogenous infection. It is supposed that the organism is a frequent member of the flora of the mouth, pharynx and probably other parts of the alimentary canal, and that only under abnormal conditions, for example trauma, does invasion of the tissues occur.

In order to determine the truth or otherwise of this view the authors studied five strains isolated from actinomycotic lesions in the cervico-facial region of human patients and six from the mouths of subjects not suffering from obvious clinical actinomycosis. The comparative study showed the various strains to be identical and typical of *Act. bovis*. It would thus appear that the causal organism does lead a saprophytic existence in the oral cavity and it probably also explains why actinomycosis in man so often follows within a few weeks of tooth-extraction.

[This is also the probable explanation of the association of actinomycosis in cattle with mouth injuries and changing of the teeth.]

G. D.

IN PARLIAMENT

DISEASES OF FARM LIVESTOCK

N.V.M.A. Survey Committee's Report

Members of Parliament continue to press the Minister of Agriculture for information as to progress regarding the taking of measures for the control of the diseases of farm livestock. The following questions and answers on this matter have been recorded in the House of Commons since the insertion, in our last issue, of the first series:—

Mr. Price asked the Minister of Agriculture (1) whether, in view of the fact that recent veterinary reports indicate that Johne's disease is widespread among dairy cattle in this country, and especially in Sussex, Cornwall and Hereford, he will consider what steps can be taken to promote the testing of herds with johnin of proved potency and to advise farmers about the best means of dealing with reactors;

(2) whether he has considered the report on the diseases of farm livestock, prepared by the National Veterinary Medical Association's survey committee; and whether, and when, he proposes to take some action along the lines proposed?

Mr. Salt asked the Minister of Agriculture whether, in view of the widespread existence of Bang's disease amongst dairy cattle in this country, he will arrange for regular testing of samples of blood from all cattle, and for preventive inoculation?

Mr. Hudson: I have considered the report on the diseases of farm livestock prepared by the National Veterinary Medical Association's survey committee, and would refer my hon. Friends to the reply given on February 4th to my hon. and gallant Friend the Member for Howdenshire (Colonel Carver), on the subject of the consultations taking place with a view to the adoption of the most suitable methods of controlling diseases of dairy stock, including Johne's disease and Bang's disease.

Mr. Price: Does the Minister realise that this is a matter of very great importance in reducing the loss of milk production in this country occasioned by these diseases, and can he indicate any of the difficulties in the way of accepting some of the recommendations of the committee?

Mr. Hudson: I could do so, but not within the confines of an answer to a Supplementary Question.

Sir T. Moore asked the Minister of Agriculture whether he is aware that the majority of farmers in the country at the present time are unable to afford to pay for the regular services of veterinary surgeons to inspect their livestock, with the result that a great deal of waste is caused through diseases becoming so established that they cannot be cured; and whether he will take steps at an early stage to arrange for a regular inspection of all essential livestock in this country?

Mr. Hudson: I am not prepared to accept the implications contained in the first part of the Question. As regards the latter part, I indicated in the reply given to my hon. and gallant Friend on February 5th that consultations are taking place on the subject of the control of diseases of dairy stock which account for the greater part of the economic losses caused by diseases of farm livestock.

The following are among other questions and answers recently recorded in the House:—

(Feeding-stuffs (Rationing, Horses)

Colonel Carver asked the Parliamentary Secretary to the Board of Trade, as representing the Ministry of Food, how the rations it is proposed to allocate to horses under the new rationing scheme, compare with the rationing scale of the Army Remount Department for horses of a similar size?

Major Lloyd George: The supply of hay and chaff is not rationed. The maximum scale of rations of oats, beans and bran which are being allocated to urban horses under the new rationing scheme makes allowance for the size of the horse and also for the nature of the work performed.. It is as follows:—

	Units per month	*Equivalent at present time to daily rate of lbs.*
Heavy draught horses		
15 hands 3 in. or more	5	18⅝
Light draught horses, town horses, etc., used mainly in harness		
15 hands or more	3½	13
Less than 15 hands but over 13 hands 2 in.	2½	9¼
13 hands 2 in. or less	1	3⅝
Riding horses		
Hunters, cobs, ponies, etc., used mainly for riding, over 13 hands 2 in. ...	¾	2·8
13 hands 2 in. or less	½	1·87

At present the unit is one cwt. In issuing coupons to large establishments whose average usage is less than the full ration, an adjustment is being made.

Under the rationing scheme the normal allowance of cereals for medium and heavy horses engaged on agricultural work is 9 lb. per day; this ration may on appeal be increased up to a maximum of 15¼ lb. per day for heavy horses on hard and continuous work. These allowances are calculated on the basis that there are certain non-rationed feeding-stuffs available on the normal farm.

The scale of allowances of oats for army horses is as follows:—

	Rations in Stables Oats lbs.	*Rations in Camps Oats lbs.*
Heavy draught horses	15	15
Horses of the Household Cavalry and horses of 16 hands and over in any unit with a strength of less than 20 horses	12	12
Officers' Chargers, all riding horses and cavalry pack horses of 15 hands 1½ and upwards and light draught horses	10	12
Riding horses (other than officers' chargers) under 15 hands 1½, and pack horses (other than above)	9	10

In addition to the above, an addition of 2 lb. of oats to the ration may be authorised in cases where animals will be standing in the open during the winter or where units are undergoing intensive training.

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Feeding-stuffs (Domestic Animals)

Sir R. Gower asked the Parliamentary Secretary to the Board of Trade, as representing the Ministry of Food, whether he is satisfied that at present retailers are fairly and evenly distributing their stocks of feeding-stuffs for dogs and other domestic animals; and, if not, whether he will consider the advisability of introducing legislation establishing a system for the registration and rationing of such animals?

Major Lloyd George: I was not aware that retailers of foods for domestic animals were not distributing their limited supplies fairly to their usual customers, but I should be glad to consider any specific complaints that my hon. Friend might care to send me. The answer to the second part of the Question is in the negative. A rationing scheme for dogs and other domestic animals would be impracticable owing to the great variety of breeds and the difficulty of defining them, to the wide variation in the nature and quantity of the food requirements of each breed, and the extent to which these requirements are usually met by purchased foods and by scraps respectively.

Fat Stock, Feeding-stuffs

Mr. Jackson asked the Minister of Agriculture whether he will arrange for extra feeding rations to be issued to farmers for fat stock which, though ready for slaughter, is left on their hands owing to foot-and-mouth restrictions being applied in their district?

Mr. Hudson: Arrangements have already been made for farmers to be able to draw additional supplies of rationed feeding-stuffs when such additional supplies are needed in the circumstances described by the hon. Member.

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Breeding Sheep (Slaughter)

Colonel Carver asked the Parliamentary Secretary to the Board of Trade, as representing the Ministry of Food, whether he can make any statement as to the numbers of breeding sheep slaughtered in this country in the last six months; and whether such large scale slaughter is prejudicial to the interests of the country?

Major Lloyd George: The Government do not consider it desirable in war conditions to publish statistics of the nature asked for by my hon. and gallant Friend. The number of breeding sheep slaughtered in the last six months was larger than usual, but in all the present circumstances the increased slaughter was not prejudicial to the interests of the country. The numbers of breeding sheep had increased considerably in the last few years before the war.

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Poultry

Mr. De la Bere asked the Minister of Agriculture whether, with a view to ensuring that the maximum number of chicks possible is reared this season, he will confer with the Minister of Food with a view to ensuring an immediate release of an adequate quantity of cut wheat to assist the poultry keepers to rear their chicks?

Mr. Hudson: It is not desired that poultry keepers should rear the maximum possible number of chicks this season. The second part of the question does not, therefore, arise.

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Pigs

Colonel Carver asked the Minister of Agriculture whether he is aware that a large number of pregnant sows and gilts have recently been slaughtered; and, as this practice was prohibited in the Great War, whether he will arrange for feeding-stuffs to be allocated to these in preference to other stock?

Mr. Hudson: I am aware that there has been an increase in the number of sows and gilts offered for slaughter and this is to be expected in view of the need to reduce the pig population in consequence of the shortage of feeding-stuffs. I have no evidence, however, of excessive offerings for slaughter of pregnant sows and gilts. In general, pig keepers must adjust their operations to accord with the supply of feeding-stuffs available to them.

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Medicinal Herbs

Mr. Liddall asked the Minister of Health whether he anticipated the shortage of imported medicines by arranging with the Board of Agriculture or the Forestry Commission last autumn to plant medicinal herbs, and with what results for the coming year; and what other steps did he take after being warned last year of the probable shortage by Members of this House.

Mr. M. MacDonald: As stated in a reply to my hon. Friend the Member for Halifax (Mr. Gledhill) on August 1st last, steps had then been taken to encourage the cultivation of the more important plants. This action is being continued in collaboration with manufacturers of pharmaceutical products and growers in order to increase production of certain herbs which can usefully be grown in this country. I am not aware that for the purpose of manufacture of medicinal preparations considered to be essential in war-time there is any serious shortage.

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

Feb. 22nd.—Meeting of the Scottish Branch, N.V.M.A., at Edinburgh, 11.30 a.m.
Feb. 26th.—Annual General Meeting of the Lancashire Division, N.V.M.A., at Liverpool, 2.15 p.m.
Feb. 26th.—Meeting of the Eastern Counties Division, N.V.M.A., at Bury St. Edmunds, 2 p.m.
Feb. 26th.—Meeting of the West of Scotland Division, N.V.M.A., at Glasgow, 3.30 p.m.
Feb. 26th.—Meeting of the Derbyshire Division, N.V.M.A., at Sutton Bonnington, 2 p.m.
Feb. 28th.—Meeting of the North Wales Division, N.V.M.A., at Rhyl, 2 p.m.
Feb. 28th.—Meeting of the Royal Counties Division, N.V.M.A., at Reading, 2.30 p.m.
Mar. 6th.—Meeting of the Central Division, N.V.M.A., at the Conway Hall, Red Lion Square, W.C.1, 2 p.m.

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ROYAL COLLEGE OF VETERINARY SURGEONS

Cancellation of Election of Council

Following upon the decision of the Council at its meeting held on December 10th, application was made to the Privy Council for special emergency powers under the Chartered and Other Bodies (Temporary Provisions) Act. The following is a copy of the letter of application and of the Privy Council's reply:—

Royal College of Veterinary Surgeons.
December 16th, 1940.

To the Clerk of the Council,
Privy Council Office,
London, S.W.1.

Sir,

Chartered and Other Bodies (Temporary Provisions) Act.

At a Meeting of Council held at the College, 10, Red Lion Square, London, on Tuesday, December 10th, I was directed to make application under the above-named Act for the under-mentioned temporary provisions to be made to enable the Council to carry on its work satisfactorily during the continuance of the war.

1. *Place of Holding Council Meetings.*—It is required by the Charter of 1844 that the meetings of Council shall be held "in London or Westminster or the suburbs thereof." The intensification of the war on London in recent months makes impracticable the holding of a representative Council Meeting in London. Power is, therefore, desired to hold Council Meetings at some convenient provincial centre in order to secure a representative attendance of members.

2. *Annual Election of Council.*—Since every member of the College wherever he resides is entitled to vote in the Annual Election, Bylaws have been passed to provide that Voting Papers shall be issued to members residing overseas at least three months prior to the date of the Annual Meeting, and to residents in the British Isles 15 days beforehand. The war has caused considerable delays in communications and there is a great danger that many members would not be able to record their votes. Moreover, the holding of an election by means of a postal vote might for several reasons, be frustrated during the war. The Council, therefore desires authority to dispense with the holding of an Annual Election and to extend the period of office of all members of Council from year to year during the present emergency. The existing power to fill casual vacancies could be exercised when the occasion requires.

3. *Annual General Meeting.*—The Charters provide for the Annual Meeting to be held in London or Westminster, power being given by the Supplemental Charter of 1876 to hold every third of such meetings in Edinburgh or Dublin. The meeting must be held during the first seven days of June (Charter of 1914). These limitations as to time and place may, it is feared, militate against the holding of satisfactory Annual Meetings, and the Council desires the power to choose some suitable centre other than the three named, and to summon the Annual Meeting at any time by proper notice during the months of June or July.

4. *Bylaws.*—The Charter requires that any alteration of Bylaws must be made at a Meeting of Council specially called for the purpose, notice having been given at a previous Council Meeting and a copy of the proposal having been hung up in the Council Room during three calendar months, such alteration to be confirmed at a subsequent Council Meeting, specially called for the purpose and held within 14 days of the date of the Meeting at which it was proposed and passed. Certain of the Bylaws framed to suit the requirements of peace-time may, during the war, become unworkable, and the Council desires the power to amend Bylaws at any Council Meeting without the necessity of giving three months' notice and of holding a confirmatory meeting, but subject to specific notice of any proposed alteration or suspension being given on the Agenda.

5. *Executive Powers.*—The Council fears that during the progress of the war it may at times be found impossible to hold Council Meetings and it desires, therefore, authority to delegate power to an Executive Committee to carry out the essential business of the College in an emergency, excluding disciplinary questions arising under Section 6 of the Veterinary Surgeons Act.

I am to express the hope that the Lord President of the Council will give favourable consideration to this application, the purpose of which is to prevent any possible deadlock arising during the continuance of War Conditions.

I am, Sir,
Your obedient Servant,
Fred Bullock,
Secretary and Registrar.

* * * * *

Reply received from the Privy Council.

January 1st, 1941.

Sir,—In reply to your letter of December 16th, 1940, I am directed to inform you that the Lord President of the Council in exercise of the powers conferred upon him by the Chartered and Other Bodies (Temporary Provisions) Act, 1939, and the Order in Council made thereunder, has been pleased to direct that for the period during which the above-mentioned Act remains in force and notwithstanding anything contained in the Charter, Supplemental Charters or Bylaws of the Royal College of Veterinary Surgeons the following provisions shall apply:—

1. It shall not be necessary for meetings of the Council to be held in London or Westminster or the suburbs thereof, but such meetings may be held in some convenient provincial centre.

2. The annual election of members of the Council may be dispensed with and the period of office of all members of the Council may be extended from year to year.

3. The Annual Meeting may be summoned at any time by proper notice during the months of June or July, and may be held at such place as the Council thinks fit.

4. The Council may delegate to an Executive Committee power to carry out in an emergency any essential business other than that which arises under Section 6 of the Veterinary Surgeons Act, 1881.

With regard to the Bylaws I am to inform you that having regard to the express provision contained in the above-mentioned Act and Order the Lord President is not prepared to give a general direction in the sense proposed in the fourth paragraph of your letter, inasmuch as it will be open to the Council to apply for a direction modifying or suspending particular Bylaws should the necessity arise.

I am, Sir,
Your obedient Servant,
E. Leadbitter (Sgd.).

The Council has decided to exercise at once the power of cancelling the election of Council during the present year, and to extend the office of all present members by one year. The effect of this decision is that the members who would normally retire this year will not retire until 1942. Their names are as follows:—

Craig, J. F.	Liverpool.
Dunkin, G. W. ...	Compton.
Kelland, Sir J. ...	Ewhurst.
Mattinson, A. B. ...	Bamber Bridge.
Nairn, W.	Blairgowrie.
Simpson, P. J. ...	Maidenhead.
Townson, W. K. ...	Peterborough.
Tutt, J. F. D.	Winchester.

The members who would retire in 1942, 1943 and 1944 will also have their respective terms of office extended by one year.

Voting papers will not, therefore, be issued during the present year, but due notice of the date and place of the Annual Meeting will be given in accordance with the terms of the Charter, and a copy of the Annual Report of the Council for the year ending March 31st next will be issued in due course.

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PERSONAL

Mr. A. Blake's Election as Mayor of Droitwich

Early this month Alderman Arthur Blake, F.R.C.V.S., D.V.H., was elected, in succession to the late Alderman E. Evans, Mayor of Droitwich for the second time since his election to the Council of that Borough. Mr. Blake has lived at Droitwich since 1926 and was elected a member of the Council in November of that year. He was Mayor of the borough in 1933-34.

A native of Nailsworth, Gloucester, Alderman Blake qualified from the London College in 1893, securing his Fellowship in 1910. After an appointment with the Shropshire County Council, he went to Burma to take up local government work there as Chief Veterinary Surgeon of Rangoon. As a result of his extremely successful work in Rangoon he was appointed to a position which in effect made him responsible for the administration of the Civil Veterinary Department of the whole of Burma, the largest province in India, with a population of over 13 millions.

. . . . .

Colonel H. E. Gibbs, D.S.O., R.A.V.C. (Retired), who was residing in France at the time of the collapse, was interned as a prisoner of war. His address is: Colonel H. E. Gibbs, British Prisoner of War, Oflag IXA, Germany.

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R.C.V.S. OBITUARY

Porter-Smith, E., 99, Wragby Road, Lincoln. Graduated London. May 15th, 1890. Died February 6th, 1941; aged 73 years.

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Major Arthur Norman Foster, O.B.E., F.R.C.V.S.

Major Arthur Norman Foster, whose death we recorded with much regret in our last issue, and who died on February 1st, 1941, after an illness of only three weeks, was a well known figure in the National Veterinary Medical Association and also in the Lincolnshire and District Division, whose meetings he regularly attended. In 1938 he occupied the position of President of this Society, when he showed his capacity as an able and proficient chairman.

Major Foster graduated from the Royal Veterinary College in 1903, attaining a Fellowship six years later. After three years in general practice, he was appointed Veterinary Inspector to Sheffield Corporation from 1907-09, and later became Veterinary Officer in Sierre Leone and Gambia. During the war he served in France and Flanders, being mentioned in despatches three times. He was appointed D.A.D.V.S. of the 49th (W.R.) Division, with the rank of Major in July, 1917, and in May, 1919, commanded the 47th Mobile Veterinary Section. For twelve years after the war Major Foster had a Colonial appointment in Uganda, and in 1933 returned to England and entered into partnership with Mr. Porter Smith, of Lincoln, until the latter's retirement in 1937, when he took over the practice.*

Major Foster enjoyed great popularity in both professional and social spheres during his residence in this district, and our sympathy goes out to his widow and two sons, both of whom are serving in His Majesty's Forces.

Major Foster was buried in St. Nicholas Cemetery, Lincoln, on February 5th, after a service in St. Swithin's Church, conducted by the Vicar, the Rev. C. F. Walters. There was a large attendance, representative of the City authorities, Masonic Lodges, etc., and including Major T. Hicks (Sleaford) and Mr. C. Weighton (Lincoln), members of the veterinary profession.

*By a sad coincidence, we have to record above the death of Mr. Porter-Smith, to whom further reference will be made in our next issue.

. . . . .

Mr. Horace Frank Downe, M.R.C.V.S.

The death of Mr. H. F. Downe, of Diss, Norfolk, which also we had the sad duty of recording in our last issue, represents another serious loss to the veterinary community of East Anglia. Mr. Downe was taken suddenly ill at Dickleburgh while driving his car. He was taken home, but did not regain consciousness.

Born in Westminster and educated at Llandovery College, Mr. Downe began his training with the late Mr. Arthur Holl, of New Buckenham, whose eldest daughter he subsequently married. He qualified at the Royal Veterinary College in 1894 and had practised at Diss for the past 40 years. For years he held appointments as an inspector under the Norfolk and East Suffolk County Councils and latterly the Ministry of Agriculture. These have been taken over by his son, Mr. Claud Downe, M.R.C.V.S., who has assumed control of the business. "Mr. Downe will be greatly missed on the farms of the district," says the *Norfolk News* in the course of a tribute to this valued member of the profession.

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GENERAL OBITUARY

Professor William Bulloch

The death of Dr. William Bulloch, Emeritus Professor of Bacteriology in the University of London, which took place on Tuesday of last week, will be mourned in the veterinary profession, not only for the loss of an outstanding figure in the realm of bacteriology, but of one who was in close association with us in several capacities and was a welcome figure—and brilliant speaker—at many of our social functions in happier days. Indeed, it was said of Professor Bulloch by the late Dr. Bradley at the R.C.V.S. annual dinner of 1937: "I approach his name with feelings of reverence and affection: I am not quite clear whether Professor Bulloch is really a medical man or a veterinary surgeon—he has been so closely connected with veterinary science for so many years that we look upon him as one of ourselves."

Professor Bulloch's main point of contact with the veterinary profession was in the capacity of examiner to the Royal College, but he also was in association as a member of the Government Committee on Foot-and-mouth Disease and as a frequent attender at the meetings of the Section of Comparative Medicine of the Royal Society of Medicine. In 1917 he was President of the Pathological Section and he was made an Honorary Fellow of that society last year. Dr. Bulloch was an original member of the Medical Research Council.

It was Dr. Bulloch who, in evidence before the Advisory Committee on Research in Diseases of Animals, in 1921, stated that as an examiner he had set the same questions in Pathology for medical and veterinary students and found that the latter had been better taught. We learn, again, that when the Weber-Parkes prize and medal for the best work on tuberculosis was instituted, the award was within the gift of Lord Dawson of Penn, who consulted Professor Bulloch as a friend and our most eminent authority upon the history of bacteriology, who had personal knowledge of all the great pioneers in the *grande époque* of that science. Dr. Bulloch, without hesitation, recommended Sir John M'Fadyean, for whose work and abilities he retained the most fervent admiration. Dr. Bulloch has always been a life-long, close friend of the veterinary profession.

After graduating from Aberdeen William Bulloch worked with Robert Koch in Germany, specialising in tuberculosis. He was deeply interested in preventive medicine and in medical history and bibliography, being for more than ten years Honorary Librarian of the Royal Society of Medicine. He was bacteriologist to the Lister Institute of Preventive Medicine and consultant in Bacteriology to the London Hospital. In 1910 Bulloch was Dobell Lecturer at the Royal College of Physicians and in 1922 Tyndall Lecturer at the Royal Institution.

Bulloch's first notable published work was "Studies in Pathology" for the quater-centenary of the University of Aberdeen (1906), to which he acted as general editor. From 1909 he began to contribute to the "Treasury of Human Inheritance," writing on diabetes insipidus, angioneurotic oedema and haemophilia. In 1923, with F. W. Andrewes and others, he wrote "Diphtheria: Its Bacteriology, Pathology and Immunology." For the Medical Research Council's "System of Bacteriology" (nine volumes, 1930-31) he acted as Chairman of the bacteriological committee and was himself an extensive contributor to the work. His fine "History of Bacteriology" published in 1938, was founded on the Heath Clark Lectures, delivered in 1936 at the London School of Tropical Medicine.

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VETERINARY BENEVOLENCE

DONATIONS RECEIVED IN RESPONSE TO THE APPEAL MADE BY THE OFFICERS OF THE ASSOCIATION

	£	s.	d.
Already acknowledged in the *Veterinary Record* of December 21st, 1940	551	17	6
Anonymous	5	0	0
Bevan, L. E. W. (second donation)	1	10	0
Hornby, H. E.	3	3	0
Locke, R. C.	2	2	0
Miller, W. C.	5	0	0
Ingram, J. M.	1	1	0
Dumfries and Galloway Division	4	4	0
Eastern Counties Division (second donation)	1	1	0
Lancashire Division	50	0	0
Scottish Metropolitan Division	12	5	0
Total to date ...	£637	3	6

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LEGAL NOTES

Alleged Injury to Cows through Faulty Erection of Milking Machine.—At Berkshire Assize Court recently, before Mr. Justice Hawke, Messrs. Gascoignes (Reading), Ltd., of Castle Street, Reading, claimed from a Wiltshire farmer, Mr. Frank Reynolds, of Stalls Farm, near Warminster, the price of a milking machine. The defendant contended that the faulty erection of the machine had caused damage to the herd, and he claimed for loss of milk, loss on animals, veterinary surgeon's fees, etc., amounting to approximately £250.

Mr. Reynolds said he signed a contract for a milking machine in August, 1939, and some time later a Mr. Bullock came to his farm to erect and demonstrate the machine. After the second milking it was found that the cows' teats were swollen. Mr. Bullock said it was nothing to worry about. He eventually left the farm, but the swellings had got much worse. In November another representative of Gascoignes came to the farm, and he reduced the vacuum pressure of the machine from 15 inches to 13. The teats still remained swollen after milking, however, and on the advice of a veterinary surgeon he ceased using the machine. A third representative of Gascoignes, a Mr. Taylor, next appeared, and he reduced the pressure to 9½ inches. At that pressure the machine worked quite satisfactorily, and it had been used daily from that time.

Mr. Reynolds went on to say that he saw Mr. Gascoigne and his agent at Frome market, and he told Mr. Gascoigne that he estimated his loss at about £250. Mr. Gascoigne, he said, offered him a 10 per cent. reduction in the price of the machine. He did not accept that offer. The milk yield of his herd during November and December, 1939, showed a drop of 1,026 gallons compared with the two previous months—despite the fact that seven freshly-calved cows had been introduced into the herd in November and December. At 1s. 1½d. a gallon that represented some £57. He had had to sell three cows which had become useless for milking purposes after the machine had been used on them. Together they represented a loss of some £36. Every one of the 38 cows in the herd, he said, had suffered an approximate loss in value of £3.

In reply to Mr. Long (for Messrs. Gascoignes), he did not know that a pressure of 15 inches was the commonly recognised pressure for this type of machine throughout the country.

Mr. Trevor K. Stephens, B.SC., M.R.C.V.S., of Frome, said he had examined Mr. Reynolds' cows in November, and found that the teats were markedly swollen when the milking cups were taken off. An analysis of the milk showed no evidence of the existence of mastitis.

Mr. Long: Can you suggest why a pressure in use all over the country should be all wrong when applied to Mr. Reynolds' herd?—It is possible that the pressure was actually greater than that indicated by the measure.

Mr. G. W. Pangbourne, Secretary of the Milking Machine Manufacturers' Association, said most plants worked at a pressure of 15 inches. He had never heard of anyone saying it was wrong to work at that pressure.

Professor G. H. Wooldridge, Past President of the Royal College of Veterinary Surgeons, said that judging from the description of the condition of the cows and the milk given by the various witnesses, he was of opinion that the cows were affected with contagious mastitis. The milking machine could not cause that condition though it might be instrumental in its spread, just as hand milking could be in affected herds milked by hand. He considered that the outbreak occurring shortly after the installation was pure coincidence.

Giving judgment, his Lordship said in respect of the counter-claim: "I am quite satisfied that the animals were damaged by something wrong with the machine and I am satisfied it was a reasonably healthy herd. I think the defendant ought to succeed, and I have considerable sympathy with Mr. Reynolds."

His Lordship gave judgment for the plaintiffs on their claim for £243 with costs, and he gave judgment for Mr. Reynolds on the counter-claim for £196 2s. 3d. with costs.

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RATIONING OF ANIMAL FEEDING-STUFFS

Under the scheme for the rationing of animal feeding-stuffs, which was introduced on February 1, purchases of feeding-stuffs can only be made by farmers against the appropriate coupons which have been and are being issued by County War Agricultural Executive Committees. In some cases farmers who are classified under the scheme

is "surplus" farmers and have received no coupons from their committee, have sold so large a proportion of their production of cereals that they have little or nothing now remaining. These farmers are entitled to make application to their County Committees for coupons. The underlying principle of the scheme is that every farmer should be able to obtain coupons to make up the difference between the feeding-stuffs that he has in stock on his farm and the basic needs of his livestock according to the scale of rations provided in the scheme.

In a recent announcement, the Ministry of Agriculture states: "In view of the pressure on County Committees, and to avoid delay in dealing with such applications, arrangements have been made for Committees to issue coupons forthwith up to one month's basic rations to any 'surplus' farmer who is genuinely without supplies. These issues can be made quickly upon a farmer's representations that he has neither adequate feeding-stuffs to provide the basic rations for his stock nor coupons to enable him to buy any. When the Committees have had time to consider applications and to calculate the amount of supplementary coupons to which the farmer is entitled during the three months ending April 30th, further coupons to make up the difference will be issued."

* * * * *

WAR DAMAGE TO LIVE AND DEAD STOCK

When the War Damage Bill becomes law, agricultural live and dead stock, including crops and growing crops, will be insurable under the "Business" Scheme operated by the Board of Trade. To avoid any interference with the food production campaign which might be entailed by a delay in the receipt of compensation for damage, it has been arranged that the Ministry of Agriculture may make interim payments to farmers in England and Wales in advance of the compensation to which they will be eventually entitled under the Scheme. In considering whether such payments shall be made in particular cases the Ministry will have regard to whether urgent payments are desirable in the national interest.

To take advantage of these arrangements, a farmer whose live or dead stock has suffered damage since the outbreak of war and who wishes to have a payment on account of his compensation should apply at once to the Ministry's Livestock Officer for his district. A list of the names and addresses of such officers is being sent to local branches of the National Farmers' Union.

Interim payments will also be made to Scottish farmers, and applications should be made direct to the Secretary of the Department for Agriculture for Scotland, St. Andrew's House, Edinburgh.

CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal view of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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SPRAINED TENDONS AND THEIR TREATMENT

To the Editor of the Veterinary Record.

Sir,—I am sorry that Mr. Catmur has not found time to attend the two recent meetings of the Royal Counties' Division at which Major Hancock's stimulating paper on "This Firing Question" was freely discussed in a more cheerful atmosphere than that pervading Mr. Catmur's letter in to-day's issue of the *Veterinary Record*. Considerable weight of evidence was produced at the meetings in favour of the theory that thickening or fibrosis of the skin and tendon sheaths increases the strength of the tendons by pressing upon them and preventing the spread of their fibrils. This line of thought was discussed by Mr. Brayley Reynolds and was supported by Professor Wooldridge, who suggested that the process of tendon breakdown might be described as "infiltration, separation, disintegration."

In reply to the questions in Mr. Catmur's letter I may say that I have never claimed infallibility for firing, nor that it was the perfect cure, as may be seen by reference to the list of cases illustrating my recent article, but what I have maintained is that in a great many cases of *severe* strain in thoroughbred horses a judicious combination of firing and blistering is the most certain method of treatment to effect a cure. I do not think that rest, massage and bandaging would result, after a severe strain, in a leg strong enough to stand up to the work involved in training, but I do agree with Mr. Catmur that comparatively mild treatment of this nature may be indicated in cases of slight strain. I hold no brief for firing and I am open to conviction that there is a method that will achieve fairly consistent results in severe cases without firing and I shall be pleased and relieved when evidence of such a method is produced in racing practice.

As regards the pain caused by the firing operation I can only repeat that this is slight when the operation is properly performed, and I consider it to be justified only inasmuch as it reduces the length of time that the horse is in pain, as indicated by lameness, and inasmuch as it reduces the likelihood of more pain being caused by further strains.

Yours faithfully,
A. C. Fraser.

The Veterinary Establishment,
Lambourn, Berks.

February 8th, 1941.

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"REMOVING A CAUSE OF COMPLAINT"

To the Editor of the Veterinary Record.

Sir,—May I suggest that the subject raised in your current issue under the above heading by Mr. A. B. Melville has more than one aspect to it. Your Editorial footnote in itself indicates this and prompts me to suggest some of the circumstances which may exist, and which may explain or even justify such an advertisement as is objected to. The College courses, as is well known, provide little field experience, the pupilage system has been whittled down to the shadow of what it might be, and I feel sure that practitioners in some cases find young assistants to be as much an anxiety and liability as an asset, from sheer lack of clinical experience amongst animals, both in health and disease. If a young graduate, chock full of the knowledge gained at College, but starved of experience, feels that he is not worth a salary until he has acquired it, and *asks* for "Hard Work" in order to gain it, is he to be deprived of the chance of obtaining such employment under the supposed ethical grounds suggested? If such a man does get employment, plus a salary, and his inexperience soon shows him not to be worth the latter, I fear few practitioners can reconcile themselves either to pay the salary, or to endure the anxiety of the mistakes he may make, sometimes with costly results. On the other hand, if such a young graduate cannot find the employment which will enable him to acquire the clinical experience which his curriculum has failed to provide, where is he to get it, and what is to become of him? I venture to think that no decent practitioner into whose practice it will advantage a graduate to go for experience, will fail to put him on his pay roll, when he finds that the "labourer is worthy of his hire," and so these few cases would produce their own cure.

Your correspondent adduces the parallel of the medical profession, but I would remind him that in that profession, where during student days the opportunities for clinical experience are many, a large number of graduates remain only too eager to be allowed to "walk the hospitals" without remuneration as a main road toward

future proficiency and eminence in their profession. I suggest that our sympathy must be divided between your correspondent and your advertiser, and that our efforts might be directed toward removing the causes rather than penalising the effects. It seems to me that Mr. Melville need not look very far to discover more serious and potent causes of any lack of employment in the profession than the one complained of, and that much of it may be traced to the activities of some of the many lay bodies which surround us, and not to mention those of the astute quacks who batten on the outskirts. I would very respectfully venture to suggest that your decision to single out for the Editorial ban such a type of advertisement from among others by laymen which appear, is a trifle drastic—and yes—that the matter has *several* aspects to it.

Yours faithfully,
E. P. Edwards.

Rhianfa,
Sandy Lane,
Prestatyn,
N. Wales.
February 9th, 1941.

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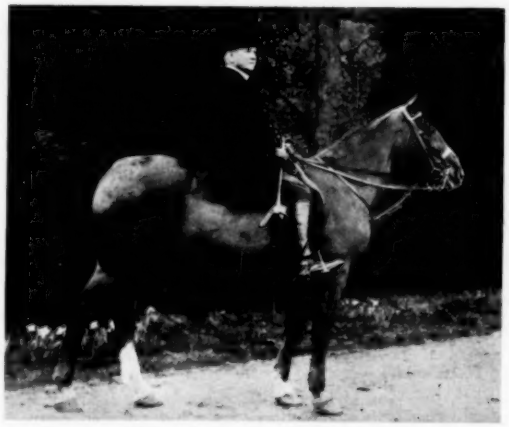
FROM OUR PRACTISING NONAGENARIAN

To the Editor of the Veterinary Record

Sir,—It was kind of you to send me a copy of the *Veterinary Record* containing such a flattering account of me. I do not know from whom you obtained the information, but I could have added a little more about my peculiarities or eccentricities. These are some of them: I never take medicine; I never had an illness that required the aid of a doctor, nor have I ever needed a dentist; I never suffered from indigestion, and can eat and enjoy any food that is placed before me; I might almost say that I am a non-smoker and alcoholic abstainer; I never visit clubs, cinemas, or any places of entertainment, or shows. I always keep out of debt and never have anything to worry about.

I love riding on horseback, but when the roads became so bad for horse riding and driving I had to purchase and drive a motor car. I was then 74 years old. I have been 71 years in constant practice and have never been away from home for a holiday. Please do not think I am saying all this as an example to others. I enjoy taking my dogs for a walk before breakfast when the weather permits.

I enclose a photo of myself on horseback when I was 87. I had a large one taken last year on a Life Guard's horse, kindly lent to me by the Commanding Officer of that regiment.



I might just add that I foolishly resigned my commission as Veterinary Officer to the Royal Horse Artillery in 1879. My elder son has retired; he was over 40 years Veterinary Officer to the Natal Government. I was one of the first veterinary surgeons—I believe the first—to use mallein as a diagnostic agent for glanders in this country, in 1895.

Yours faithfully,
James Webb, F.R.C.V.S.

Veterinary Hospital,
Clarence Road,
Windsor.
February 6th, 1941.

DISEASES OF ANIMALS ACTS, 1894 TO 1937, AND AGRICULTURE ACT OF 1937 (PART IV)

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period.	Anthrax.		Foot-and-Mouth Disease.		Parasitic§ Mange.		Sheep Scab.	Swine Fever.	
	Outbreaks confirmed.	Animals attacked.	Outbreaks confirmed.	Animals slaughtered as diseased or exposed to infection.	Outbreaks reported by the Local Authorities.	Animals attacked.	Outbreaks confirmed.	Outbreaks confirmed.	Swine slaughtered.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Period 1st to 15th January, 1941	25	26	22	1,531	—	7*	22	140	43
Corresponding period in									
1940	21	22	4	558	4	6	23	190	107
1939	37	39	11	1,896	1	1	22	42	27
1938	51	51	32	4,640	6	10	30	16	11

Note.—The figures for the current year are approximate only.

*These animals relate to an outbreak confirmed during the period December 1st to 15th, 1940.

In addition to the 169 outbreaks of Swine Fever notified in the summary for the period December 16th to 31st, 1940, as having been confirmed during that period, there was 1 further outbreak of Swine Fever confirmed between the same dates.

§Excluding outbreaks in Army Horses.